

May 14, 1999

To: Board of Directors (Engineering and Operations Committee--Action)

From: General Manager _____

Submitted by: Gary M. Snyder _____
Chief Engineer

Subject: Appropriate \$1,950,000 for Design and Construction for Standpipe Strengthening Project

Reference: Appropriation No. 15342

RECOMMENDATION(S)

To perform design and construction activities to strengthen 19 standpipes on Metropolitan’s distribution system, it is recommended that the Board:

1. Determine that the project qualifies for Categorical Exemption under the California Environmental Quality Act;
2. Appropriate \$1,950,000 of budgeted funds to finance all associated costs; and
3. Authorize the General Manager to have all work performed, except for contracts of \$250,000 or more.

EXECUTIVE SUMMARY

In the early 1990’s, Metropolitan’s Seismic Strengthening Program was undertaken to identify and correct potential risks to Metropolitan’s water treatment, storage, and distribution systems. A portion of the study involved analyzing standpipes located on a number of Metropolitan’s pipelines and feeders. It was determined that 19 standpipes, which relieve excess pressures within the pipelines, are in need of seismic strengthening. Without the strengthening, the standpipes could experience severe structural damage or total collapse during a major earthquake. The total program estimate is \$1,950,000.

JUSTIFICATION

The proposed strengthening of the standpipes will help ensure that the affected pipelines will continue functioning following a major earthquake.

ALTERNATIVE(S) TO PROPOSED ACTION

Do Not Strengthen the Standpipes

An alternative is to not strengthen the standpipes; however, without the strengthening, they could experience severe structural damage or collapse during a major earthquake. The potential damage could require the affected pipelines to be shut down until the standpipes are repaired or replaced and surrounding damages mitigated.

FUNDING REQUEST

Program Name: Distribution System - Standpipe Strengthening			
Source of Funds: Pay-As-You-Go Fund			
Appropriation No.: 15342	Board Action No.: 1	Budget:	\$2,000,000
Requested Amount:	\$1,950,000	Capital Program No.:	98912-A
Total Appropriated Amount:	\$1,950,000	Capital Program Page No.:	E-35
Total Program Estimate:	\$1,950,000	Program Category:	Asset/System Integrity

ACTIONS AND MILESTONES

- August 1998 - Complete Engineering Studies
- October 1999 - Complete Design
- May 2000 - Complete Construction

CEQA COMPLIANCE / ENVIRONMENTAL DOCUMENTATION

The proposed project qualifies for categorical exemption under the California Environmental Quality Act (CEQA) because it consists of the minor alteration of existing public facilities involving no use beyond that previously existing (State CEQA Guidelines, Section 15301). No other environmental documentation is required for this project.

DETAILED REPORT

Metropolitan's Seismic Strengthening Program identified serious structural deficiencies in 19 of the 34 standpipes located on the distribution system pipelines. These standpipes were designed and built years ago before existing seismic design codes were established. The standpipes are approximately five feet in diameter and constructed of steel or concrete, vary in height from

approximately 30 to 85 feet and cantilever out of a concrete encasement built around the pipeline. The standpipes prevent the pipelines from becoming damaged by pressure surges on the system.

Without the strengthening, the standpipes could experience severe structural damage during a major earthquake resulting in probable collapse and the release of uncontrolled flows. The damage would require the pipeline to be shut down until the standpipes could be repaired or replaced and damage to the surrounding environment mitigated.

The deficient standpipes will be upgraded by increasing the size of the concrete bases and installing a steel sleeve around the existing standpipes. This construction work will be completed by Metropolitan personnel without a pipeline shutdown and within existing Metropolitan right-of-ways.

AT/bm

Attachment 8-1A

Attachment 8-1B

Attachment 8-1A

FINANCIAL STATEMENT

(Capital Program No. 98912-A)

The breakdown of the total estimated cost for study, design and construction is as follows:

	BOARD ACTION
	<u>No. 1</u>
Labor:	
Engineering:	
Study	\$ 47,000
Design	81,000
Post Design	79,000
Operations	408,000
Water Quality	4,000
Planning	<u>6,000</u>
Subtotal Labor	\$ 625,000
Material and Supplies	\$ 539,000
Incidental Expenses	11,000
Professional/Technical	20,000
Operating Equipment	33,000
Contingencies	<u>386,000</u>
Subtotal Direct	<u>\$1,614,000</u>
Administrative Overhead	336,000
Total	<u>\$1,950,000</u>
Source of Funds: Pay-As-You-Go Fund	
Projected Expenditures of Funds :	
Through Fiscal Year 1997/98	55,000
Fiscal Year 1998/99	149,000
Fiscal Year 1999/00	1,360,000
Contingencies	<u>386,000</u>
Total	\$1,950,000
Capital Program for Fiscal Year 1998/99	
Total Budget	\$ 2,000,000
Program Estimate for FY 1998/99	\$ 149,000

Attachment 8-1B

Total Program Estimate: \$1,950,000

